

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	"00395".ap.	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2007/02/20 19:42
L2	5	"003935".ap.	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2007/02/20 19:48
L3	1	l2 and (small adj molecule)	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2007/02/20 19:48
S1	239	p27kip1	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2007/02/20 13:36
S2	0	S1 and t187A	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2006/06/05 08:36
S3	0	S1 and t187	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2006/06/05 08:37
S4	144	S1 and mutant	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2006/06/05 08:47
S5	3	S1 and 800/18.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2006/06/05 08:40
S6	0	S1 and 800/88.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2006/06/05 08:40
S7	3	S1 and 800/8.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2006/06/05 08:40
S8	2	S7 not S5	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2006/06/05 08:40

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S9	21	S4 and 435/325.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2006/06/05 08:47
S10	269	p27kip1	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2007/02/20 13:36
S11	0	S10 and t187A	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2007/02/20 13:36
S12	0	S10 and p27t187A	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2007/02/20 13:36
S13	1	p27t187A	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	OFF	2007/02/20 19:42



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Search	Most Recent Queries	Time	Result
<u>#3</u>	Search homologous recombination nuclear transfer	10:02:07	<u>33</u>
<u>#1</u>	Search schnieke cloning	09:52:49	<u>11</u>

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Search	Most Recent Queries	Time	Result
#18	Search homologous recombination homozygous in vitro isolated	12:56:30	<u>6</u>
#16	Search homologous recombination homozygous in vitro	12:55:44	<u>49</u>
#15	Search homologous recombinaiton homozygous in vitro	12:52:32	<u>0</u>
#13	Search poljaeva and campbell nuclear transfer	10:48:33	<u>36</u>
#12	Search poljaeva and campbell livestock	10:47:33	<u>35</u>
#11	Search poljaeva and campbell	10:47:21	<u>29517</u>
#10	Search poljaeva campbell	10:47:05	<u>29517</u>
#3	Search homologous recombination nuclear transfer	10:02:07	<u>33</u>
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Phenotypic Allele Detail

Your Input Welcome

Allele Symbol: **Cdkn1b^{tm1Mlf}**

Name: targeted mutation 1, Matthew Fero
ID: MGI:1857146

Synonyms Cdkn1^{btm1Mlf}, p27⁻, p27^{Kip1-}, p27^{Kip1}, p27^{Kip1}-null

Allele details

Allele Type: Targeted (knock-out)

Strain of Origin: 129S4/SvJaeSor

ES Cell Line: AK7

ES Cell Line Strain: 129S4/SvJaeSor

Mutation: Disruption caused by insertion of vector
 Replacement of the entire coding region of the Cdkn1b
 gene with a neomycin cassette. (*J:33400*)

Gene Expression in Cdkn1b^{tm1Mlf} mutants (4 assay results)

International Mouse Strain Resource: ([Search for IMSR strains with Cdkn1b mutations](#))

References and Additional Notes: ([See Below](#))

Gene information

Symbol: [Cdkn1b](#)

Name: cyclin-dependent kinase inhibitor 1B

Chromosome: 6

Genetic Position: 62.0 cM

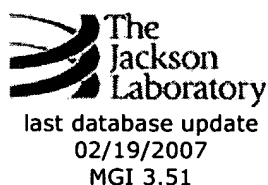
Genome Coordinates: Chr6:134886110-134890000
 bp, + strand (From Ensembl annotation of NCBI Build 36)

Human Ortholog: [CDKN1B](#)

Phenotypes

Phenotypic details for all genotypes that include at least one Cdkn1b^{tm1Mlf} allele

Phenotype	Genotype	
	Allelic Composition	Genetic Background
Go To	Cdkn1b^{tm1Mlf} / Cdkn1b^{tm1Mlf}	involves: 129S4/SvJaeSor
Go To	Cdkn1b^{tm1Mlf} / Cdkn1b^{tm1Mlf}	involves: 129S4/SvJaeSor * C57BL/6J
Go To	Cdkn1b^{tm1Mlf} / Cdkn1b⁺	involves: 129S4/SvJaeSor
Go To	Cdkn1b^{tm1Mlf} / Cdkn1b^{tm1Mlf} Trp53^{tm1Brd} / Trp53^{tm1Brd}	C57BL/6J
Go To	Cdkn1b^{tm1Mlf} / Cdkn1b⁺ Crebbp^{tm1Jvd} / Crebbp^{tm1Jvd} Tg(MMTV-cre)4Mam/0	involves: 129 * C57BL/6 * CBA
Go To	Ccnd1^{tm1Dsn} / Ccnd1^{tm1Dsn} Cdkn1b^{tm1Mlf} / Cdkn1b^{tm1Mlf}	involves: 129/Sv * C57BL/6
Go To	Cdkn1b^{tm1Mlf} / Cdkn1b^{tm1Mlf} Tg(KRT5-CDK4)2303Mlrp/0	involves: 129S4/SvJae * C57BL/6 * FVB * SENCAR * SSIN
Go To	Cdkn1b^{tm1Mlf} / Cdkn1b^{tm1Mlf} Nkx3-1^{tm1.1Saa} / Nkx3-1^{tm1.1Saa}	involves: 129S4/SvJaeSor * C57BL/6 * FVB/N
Go To	Cdkn1b^{tm1Mlf} / Cdkn1b^{tm1Mlf} Tg(MMTV-vHaras)SH1Lcd/0	involves: 129S4/SvJaeSor * C57BL/6J * CD-1



Go To	Cdkn1b^{tm1Mlf}/Cdkn1b^{tm1Mlf} Cdkn2d^{tm1Maro}/Cdkn2d^{tm1Maro}	involves: 129X1/SvJ * C57BL/6
Go To	Cdkn1b^{tm1Mlf}/Cdkn1b^{tm1Mlf} Trp53^{tm1Brd}/Trp53^{tm1Brd}	involves: C57BL/6J * C3H * NIH

Allelic Composition	Genetic Background
Cdkn1b^{tm1Mlf}/Cdkn1b^{tm1Mlf}	involves: 129S4/SvJaeSor

tumorigenesis

increased incidence of induced tumors (J:103819)

- increase in incidence of urethane-induced lung tumors compared to wild type, with more large tumors than in heterozygotes
- 100% penetrance of pituitary adenomas and harderian gland tumors after 20 weeks of urethane treatment, as well as increased incidence of liver hemangiomas, uterine tumors and ovarian granulose cell tumors

immune system

abnormal spleen cellularity (J:107588)

- Cdkn1b-deficient mice show hypercellular spleens when receiving transplants of bone marrow from mutant or wild type mice

enlarged spleen (J:107588)

- spleens are enlarged when recipients receive bone marrow cells from wild type or mutant donors

enlarged thymus (J:107588)

- Cdkn1b-deficient mice develop hyperplastic thymuses when receiving bone marrow from wild type or mutant donors

hematopoietic system

abnormal spleen cellularity (J:107588)

- Cdkn1b-deficient mice show hypercellular spleens when receiving transplants of bone marrow from mutant or wild type mice

enlarged spleen (J:107588)

- spleens are enlarged when recipients receive bone marrow cells from wild type or mutant donors

enlarged thymus (J:107588)

- Cdkn1b-deficient mice develop hyperplastic thymuses when receiving bone marrow from wild type or mutant donors

Allelic Composition	Genetic Background
Cdkn1b^{tm1Mlf}/Cdkn1b^{tm1Mlf}	involves: 129S4/SvJaeSor * C57BL/6J

growth/size

increased body weight (J:33400)

- body weight increase becomes evident between 2-3 weeks of age, is maximal by 10 weeks of age, and is maintained throughout adulthood and is partly attributable to enlargement of all internal organs, however do not have an increase in body fat amount

tumorigenesis

seizures (J:58522)

abnormal brain cell (J:58522)

- increased proliferation of neurons in all parts of the brain
- the increased proliferation was balanced by increased apoptosis

Allelic Composition

Genetic Background

Cdkn1b^{tm1Mlf}/Cdkn1b^{tm1Mlf}
Trp53^{tm1Brd}/Trp53^{tm1Brd}

involves: C57BL/6J * C3H * NIH

life span/aging

premature death (J:87536)

- the median latency to morbidity from tumor burden is significantly decreased in the double mutant compared to mice homozygous for Trp53^{tm1Brd} alone
- this effect is synergistic

tumorigenesis

increased tumor incidence (J:87536)

- the most common types of tumors are similar to mice homozygous for Trp53^{tm1Brd} alone, however additional tumor types are found in the double homozygous mice

T cell derived lymphoma (J:87536)

- the most common type of tumor is T-cell lymphoma

sarcoma (J:87536)

- the second most common types of tumor are sarcomas including; rhabdomyosarcoma, osteosarcoma, hemangiosarcoma, and poorly differentiated

References (Original) J:33400 Fero ML *et al.*, "A syndrome of multiorgan hyperplasia with features of gigantism, tumorigenesis, and female sterility in p27(Kip1)-deficient mice." Cell 1996 May 31;85(5):733-44

All references(46)



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